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INC

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/680,323 | 10/06/2000 | Kinya Odagiri | 0675-31 | 9127 |

31780 7590 08/07/2003

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POTOMAC FALLS, VA 20165

EXAMINER

TAMAI, KARL I

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2834

DATE MAILED: 08/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 09/680,323 | Applicant(s) ODAGIRI ET AL. | |
| | Examiner Tamai IE Karl | Art Unit 2834 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3/1, 4, 6/3/1, and 7/4 is/are rejected.
- 7) ☒ Claim(s) 2, 3/2, 5, 6/3/2, and 7/5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The rejection of Claims 1-7 under 35 U.S.C. 112, first paragraph, is withdrawn.
2. The rejection of Claims 1-6 under 35 U.S.C. 112, second paragraph, is withdrawn.

Claim Objections

3. The objection to Claim 7 under 37 CFR 1.75(c) is withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang(US 5,583,746) and Saito(US 5,979,541). Wang teaches a thin motor characterized by having a heat plate 10 supporting the rotor fan 40 in a central portion thereof and whose contact surface matches the item to be cooled 50. The fan having blades with a gentle arc(see figure 2). The heat plate including the stator and the heat plurality of radiator plates are secured together by diagonally opposed bolts 14, 15. Wang does not teach the fan having a two step inverted saucer shape, a raised central portion of the heat

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plate, a stator coil substrate, and the rotor blades pushing air in the radial direction.

Saito teaches a fan motor with a central raised portion to support the stator coil substrate 63,64 and shaft. Saito teaches the rotor blades forcing the air in the radial direction of the Saito teaches a fan with an outer radial step 722 that extends near the heat radiator fins 32 and an inner radial fan 723 that mates around the lid 4. The rotor fan and the two step blades forming an inverted saucer over the stator. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the cooling device of Wang with the motor of Saito to improve the cooling effect of the fan and prevent extraction of the fan through the intake aperture.

6. Claims 3/1, 4, 6/3/1, and 7/4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang(US 5,583,746) and Saito(US 5,979,541). Wang and Saito teach every aspect of the invention except the spacers being heat conducting material, the heat plate being a material with excellent thermal conductivity(precious metal, copper) or partially diamond crystal, and the heat sink being aluminum or copper. Wang teaches spacers 20 between the fins 30, but does not specify the material of the spacers or the fins. Saito teaches the heat plate and fins being copper(col. 5, line 13). It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the cooling device of Wang with the spacers being a heat conducting material, with the heat plate being copper, and the heat sink to be copper to allow the heat from the CPU to be drawn into the cooling fins 30 and dissipated in the air flow, as taught by Saito.

Allowable Subject Matter

7. Claim 2, 3/2, 5, 6/3/2, and 7/5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

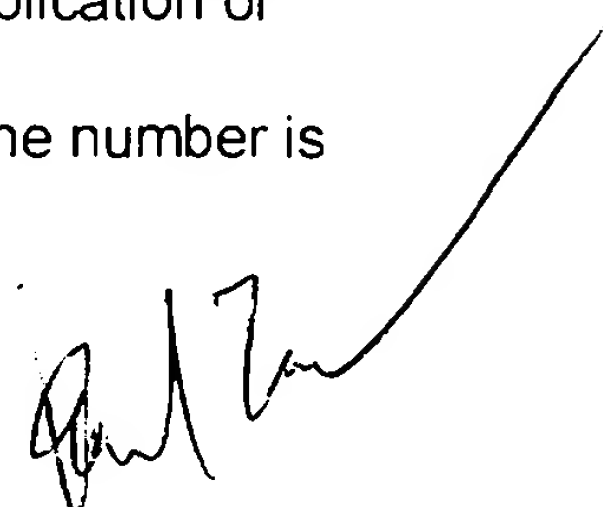
8. Applicant's arguments filed 5/6/02 have been fully considered but they are not persuasive. The Applicant's arguments that Saito does not teach different angles at the inner and outer stepped portions of the blades is not persuasive because the limitation is not claimed. Claim 1 claims the blades having the same gentle arc which creates an air flow at the intake of the central section and exhausted radially at the outer step, not different blade angles as suggested by the Applicant. The Applicant's argument regarding motivation to combine is not persuasive. Saito clearly and repeatedly provides explicit motivation by "high cooling effect and easy assembly", see col. 1, lines 44-47 and again "improved amount and force of cooling air without enlargening the thickness of the fan", see col. 2, lines 37-43. The Applicant's argument regarding Wang is not persuasive because two way motivation to combine is not required. The invention of Wang is improved by the combination with Saito, therefore the claimed invention is an obvious modification of know art and the examiner has met the prima facie test for obviousness.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703)308-1371. The facsimile number for the Group is (703)305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
August 3, 2003


KARL TAMAI
PRIMARY EXAMINER